

REMARKS

In response to the Office Action mailed March 22, 2011, Applicants respectfully request the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. By this paper, Applicants have amended Claims 1, 3-5, 7-9, and 11; Claims 2, 6, and 10 remain as previously presented; and Claims 11-12 are withdrawn. Accordingly, Claims 1-11 are currently pending in the present Application.

Specification

The specification has been amended to include section headers. In addition, the abstract has been amended to not exceed 150 words in length. Applicants respectfully request the Examiner remove the objections to the specification.

Claim Objections and Rejections under 35 U.S.C. §112

Applicants have amended Claims 1-11 to clarify the language thereof in response to the Section 112 rejections. Accordingly, Applicants believe that the various amendments discussed above address and overcome the above noted objections and rejections noted in the Office Action.

Prior Art Rejections

Next, Applicants note that Claims 1, 3, 6, 7 and 9-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 4,983,182 issued to Kijima et al. ("Kijima"). Additionally, Claims 2, 4, 5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kijima in view of U.S. Pat. No. 5,902,429 issued to Apte et al. ("Apte"). While Applicants reserve the right to prosecute these claims as originally filed, Applicants have amended Independent Claim 1 to expedite prosecution of this Application. Accordingly, Applicants respectfully request that the present rejection of Claim 1, as well as the rejections of Claims 2-11 be withdrawn and that these claims be indicated as allowable.

On page 6, the Office Action states, "Kijima et al. discloses a process for providing a porous layer of alpha-tricalcium phosphate and zirconia onto a ceramic substrate made of zirconia where the substrate is an implant material for the living body such as an artificial tooth root (see col. 1, lines 5-27). The ceramic layer having a porosity is formed on the surface by applying a dispersion with a viscous liquid (water), to the surface and sintering the dispersion to

form a ceramic layer where the intermediate spaces are formed by driving off the water and the dispersant (see Example 12).”

In contrast, Claim 1, as amended, recites a method for providing a porous surface layer on a ceramic substrate which forms a part of a dental installation, *inter alia*, comprising (emphasis added):

providing the ceramic substrate with a surface with a first porosity;
forming **a ceramic layer with a second porosity having larger pores than in the first porosity**; the step of forming the ceramic layer, comprising:
applying a dispersion with a viscous liquid to the surface, said viscous liquid having the ability to be sucked by capillary force into a first pore formation in the ceramic substrate **to retain on the surface material particles and/or liquid particles of the dispersion having a size to not penetrate into the first pore formation** and which contribute to the construction of the ceramic layer, and
sintering the dispersion to form the ceramic layer in which particles finally forming the ceramic layer are held together with intermediate spaces which are included in the second porosity, **the intermediate spaces being formed either by the material particles and/or liquid particles** separate from the particles finally forming the layer that are driven off during the sintering.

Applicants respectfully submit that the cited portions of Kijima fail to disclose or render obvious at least the above noted features of Claim 1. For example, the cited portions of Kijima fail to disclose or render obvious “a ceramic layer with a second porosity having larger pores than the first porosity” and that intermediate spaces are being formed either by material and/or liquid particles “having a size to not penetrate into the first pore formation.”

On page 6, the Office Action notes that although Kijima fails to state that “the ceramic layer has larger...pores than the first porosity, Kijima states “the importance of having a larger porous ceramic layer because it affects the biological activity of the layer as well as crack formation in the layer (see col. 5, lines 5-21). Therefore it would have been obvious to one having ordinary skill in the art through routine experimentation to provide the ceramic layer with larger or more pores than the ceramic substrate in order to ensure the greatest biological activity and prevent cracking and delaminating of the layer from the substrate as desired by Kijima.”

However, the cited portions of Kijima disclose forming porosity of the ceramic layer by using a certain weight ratio of the particles that form the ceramic layer, e.g., weight ratio of zirconia to HAP to be between 0.05 and 20. In contrast, Applicants have found a way to form the porosity of the ceramic layer by using a certain size, e.g., “a size to not penetrate into the first

pore formation”, of the particles that are driven off to form the pores. Controlling the size of the particles which form the pores allows a more direct method to control the pore size as opposed to using a certain weight ratio of particles that form the ceramic layer surrounding the pores.

As mentioned above, the cited portions of Kijima fail to disclose or render obvious that the intermediate spaces are being formed either by material and/or liquid particles “having a size to not penetrate into the first pore formation.” For example, the Examiner notes that Kijima teaches intermediate spaces “formed by driving off the water and dispersant” (see page 6 of the Office Action). However, the cited portions of Kijima do not disclose that the water and/or dispersant has “a size to not penetrate into the first pore formation,” as required by amended Claim 1. Applicants note that by forming intermediate spaces either by material and/or liquid particles “having a size to not penetrate into the first pore formation,” the pores formed by sintering to drive off these particles can form a “second porosity having larger pores than in the first porosity,” as mentioned above and also not disclosed or rendered obvious by the cited portions of Kijima. Accordingly, Applicants submit that Claim 1 is patentably distinguished over Kijima, and respectfully request that the Examiner pass this claim to allowance.

Each of Claims 2-11 depends either directly or indirectly from Claim 1, so each of Claims 2-11 includes all the features of Claim 1, as well as other features of particular utility. For at least the foregoing reasons with respect to Claim 1, each of Claims 2-11, is patentably distinguished over Kijima. In addition, the Examiner has not identified any teachings of Apte that would overcome the shortcomings of Kijima. Applicants respectfully request that the Examiner pass Claims 2-11 to allowance.

No Disclaimers or Disavowals

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution.

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Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present Application.

CONCLUSION

Applicants respectfully submit that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicants respectfully request that the Examiner indicate that Claims 1-11 are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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